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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HENRY GENE RAMIREZ and GABRIEL A. RAMIREZ

Appeal 2010-002108
Application 10/758,845
Technology Center 3600

Before: STEFAN STAICOVICI, PHILLIP J. KAUFFMAN, and
WILLIAM V. SAINDON, *Administrative Patent Judges*.

SAINDON, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134 from the Examiner's rejection of claims 4-13 under 35 U.S.C. § 112, first paragraph, as lacking an enabling disclosure and under 35 U.S.C. § 103(a) as unpatentable over Jamison (US 5,970,879, issued Oct. 26, 1999). Claims 1-3 are withdrawn from consideration. We have jurisdiction under 35 U.S.C. § 6(b).

The Invention

Claim 4, reproduced below, is illustrative of the claimed subject matter.

4. A gun chamber for use with a gun action and barrel, and configured for accepting a 50 caliber gun cartridge having a proximal and distal end for propelling a bullet of a pre-determined weight, the gun chamber comprising:

 a case section proximal to the gun action and configured for housing a cartridge case having a diameter of approximately 0.688 inches at the distal end;

 a free bore section proximal to the barrel and distal end of the cartridge case;

 a shoulder section at the proximal end angling inward from the case section; and

 a neck portion located between the shoulder section and the free bore section wherein the neck portion is configured for accepting a cartridge having a mouth with a bore diameter of approximately .510 inches for accepting a bullet; and

 wherein the length of the case section is dependant [sic] upon water weight volume of the cartridge case, the bore diameter of the gun barrel, and the weight of the bullet.

SUMMARY OF DECISION

We AFFIRM.

OPINION

Enablement

In relevant part, independent claims 4 and 9 require a gun chamber having a case section with a length “[dependent] upon water weight volume of the cartridge case, the bore diameter of the gun barrel, and the weight of the bullet.” The Examiner rejected claims 4 and 9 because “[t]here is no indication, in the specification or claims, as to how the length of the case depends on these variables, and further, what value might be specified by these variables.” Ans. 3. Accordingly, the first issue in this appeal is whether the Specification has a disclosure sufficient to enable a person of ordinary skill in the art to make a case section with a length “[dependent] upon water weight volume of the cartridge case, the bore diameter of the gun barrel, and the weight of the bullet” without undue experimentation.

The enablement requirement seeks to assure that a person skilled in the art can make and use the invention without undue experimentation. *In re Wands*, 858 F.2d 731, 737 (Fed. Cir. 1988). The claims do not set forth how to determine the case section length. Thus, we turn to the Specification. The passages cited by Appellants (paras. [0019], [0027], [0030], table at Spec. pp. 12-13)¹ do not describe determining the case length using the listed variables. The table² cited by Appellants appears to show some relevant information (i.e., water weight, bore size, and bullet weight variables³), but the table shows the variables calculating an “Efficiency

¹ See App. Br. 6, 8 (summarizing the claimed invention), 9 (incorporating by reference arguments from a reply to final office action mailed Mar. 17, 2008 at p. 5, directing attention to the table at pp. 12-13 of the Specification).

² “Efficiency Ratings of Cartridge Embodiments with 30 Degree Shoulder”

³ As defined in the table, water weight is the weight of the water that would fill a cartridge case, in grains (7000 grains = 1 lb), bore size is the diameter

Rating,” not the length of the case section. Further, the table is limited to 30 degree shoulders; it is unclear what the effect of other shoulder angles would have on these variables. While the table appears to describe a roughly linear relationship between water weight and case length, this relationship does not determine the case length based on the bore size or bullet weight as required by the claims. Indeed, the table suggests that bore size and bullet weight may not in fact affect the case length⁴. We are unable to find any disclosure in the Specification where the length of the case is determined using the water weight, bore size, and bullet weight. Accordingly, the Specification provides no examples or guidance as to how to determine a case length based on water weight, bore size, and bullet weight.

The Wadsworth declaration contends that there are infinite combinations of dimensions available to create a cartridge because there are many variables to consider. *See* Decl. of Wadsworth, para. 5. For example, Wadsworth states that the water weight variable takes into consideration the volume of the casing but a particular case volume can be enclosed by several shapes, depending on the variables listed in paragraphs 5 and 6 of the declaration, even considering the variables fixed by the claims. As such, we find that by varying taper, necking, wall thickness, or the one of the other variables discussed in Wadsworth, one could come up with nearly infinite possible casing lengths for a particular water weight. Thus, significant experimentation would be required to determine what case length to use for

of the bullet, in thousandths of an inch, and bullet weight is the weight of the bullet itself, in grains. *See also* Spec., para. [0027].

⁴ For example, with a water weight of 139.5 grains, a bore diameter of 510 thousandths of an inch, and a bullet weight varying from 500 to 650 grains, the case length remains at 1.9 inches. As such, the case length of 1.9” does not depend on bullet size, as required by claim 4.

any given water weight and bullet weight combination. Consequently, we do not find that the disclosure in the Specification would allow one of ordinary skill to determine the relationship between case length, water weight, bore size, and bullet weight, without undue experimentation in view of the complexity of cartridge design.

Independent claims 4 and 9 purport to cover a gun chamber configured to accept any 50 caliber cartridge having a cartridge case diameter of approximately 0.688 inches and bore of 0.510 inches. The dependent claims add additional restrictions, but do not significantly limit the vast number of variables that must be considered in cartridge and chamber design. *See, e.g.,* Wadsworth, paras. 5-6 (“for any given caliber, there are infinite combinations of dimensions available to design a gun cartridge”). Accordingly, the claims are broad and read on a large number of gun chamber configurations for a large number of cartridge designs.

The weight of the record supports a finding that, in view of the Specification, it would require undue experimentation to determine how “the length of the case section ... [is dependent] upon water weight volume of the cartridge case, the bore diameter of the gun barrel, and the weight of the bullet.” Accordingly, we sustain the Examiner’s rejection of claims 4-13 as lacking an enabling disclosure.

Obviousness

The Examiner found that Jamison describes a gun chamber having the claimed structure, except for a 50 caliber cartridge chamber having the particular measurements and ranges claimed. Ans. 4-5. The Examiner found that the length of the case section is inherently dependent upon the water weight of the case, the bore diameter of the barrel, and the weight of the bullet. Ans. 4. The Examiner also found that 50 caliber cartridges are

“known to be within the ranges claimed” and that it would have been obvious to provide “those values for a 50-caliber cartridge.” Ans. 5.

Appellants argue that Jamison describes that the length of the case is dependent on the diameter of the bullet, not the weight of the bullet or the water weight of the case. App. Br. 13. Accordingly, the second issue in this appeal is whether the Examiner has shown that Jamison renders obvious a gun chamber with a case section having a length “[dependent] upon water weight volume of the cartridge case, the bore diameter of the gun barrel, and the weight of the bullet.”

“Inherency ... may not be established by probabilities or possibilities. The mere fact that a certain thing *may* result from a given set of circumstances is not sufficient.” *In re Oelrich*, 666 F.2d 578, 581 (CCPA 1981) (quoting *Hansgirk v. Kemmer*, 102 F.2d 212, 214 (CCPA 1939)) (emphasis added). Thus, to permit us to sustain the Examiner’s finding that the length of the case is inherently dependent on the water weight volume, bore diameter, and weight of the bullet, the record “must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.” *Continental Can Co. v. Monsanto Co.*, 948 F.2d 1264, 1268 (Fed. Cir. 1991).

From the table on pages 12 and 13 of the Specification, it is not clear that the length of the case is necessarily dependent on the bore diameter and bullet weight. For example, a bullet’s weight could be 650 grains, but the case length could be anywhere from 1.9” to 2.5”. As such, the length of the case is not necessarily dependent on the weight of the bullet. Thus, we do not sustain the Examiner’s finding of inherency.

The Examiner further states that it would have been obvious to “provide those values for a 50-caliber cartridge.” Ans. 5 (discussing “discovering an optimum value of a result effective variable”). However, the Examiner has not provided evidence that the variables and the effects of varying them are known to be result-effective. *See In re Antonie*, 559 F.2d 618, 620 (CCPA 1977) (reversing a rejection when the parameter was not recognized to be a result effective variable). The Examiner then states that it would be “‘obvious to try’ to achieve the same design [of Jamison] on differently-sized gun cartridges ... given the small variation in size that such a modification would entail.” Ans. 5. However, the Examiner has not provided evidence or reasoning to suggest that the possible approaches to solve the problem are “known and finite” or that one of ordinary skill had “good reason to pursue the known options within his or her technical grasp.” *See Takeda Chem. Indus. v. Alphapharm Pty.*, 492 F.3d 1350, 1359 (Fed. Cir. 2007) (discussing the requirements of an “obvious to try”-type obviousness rejection). While parameters such as case length, water weight, bullet weight, and shoulder angle are known to describe cartridges, this does not mean that every cartridge configuration is obvious to try, without evidence or reasoning tending to demonstrate the obviousness of the particularly claimed configuration. The Examiner has not provided such evidence or reasoning.

Lastly, the Examiner states that the “length of the case section is dependent upon ...” limitation of independent claims 4 and 9 is merely an intended use and a product-by-process limitation and thus “not pertinent in this instance to the patentability of this product claim.” Ans. 8-9. However, claim 4 requires a case section of a gun chamber having a length determined by the water weight volume of the cartridge case, the bore diameter of the

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gun barrel, and the weight of the bullet. Similarly, claim 9 requires a step of forming a length of a case section of a gun chamber based on the water weight volume of the cartridge case, the bore diameter of the gun barrel, and weight of the bullet. Both claims recite limitations material to determining the patentability of the claim and cannot simply be ignored. Thus we do not sustain the Examiner's rejection of claims 4-13 under 35 U.S.C. § 103(a).

DECISION

We affirm the Examiner's decision rejecting claims 4-13 under 35 U.S.C. § 112, first paragraph. We reverse the Examiner's decision rejecting claims 4-13 under 35 U.S.C. § 103(a) as unpatentable over Jamison.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

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